

Control and data information can be electronically executed and stored on at least one computer-readable medium. The system can be implemented to execute on at least one computer node in at least one live communications network. Common forms of at least one computer-readable medium can include, for example, but not be limited to, a floppy disk, a flexible disk, a hard disk, magnetic tape, or any other magnetic medium, a compact disk read only memory or any other optical medium, punched cards, paper tape, or any other physical medium with patterns of holes, a random access memory, a programmable read only memory, and erasable programmable read only memory (EPROM), a Flash EPROM, or any other memory chip or cartridge, or any other medium from which a computer can read.

[0121] While the present teachings have been described above in terms of specific configurations, it is to be understood that they are not limited to these disclosed configurations. Many modifications and other configurations will come to mind to those skilled in the art to which this pertains, and which are intended to be and are covered by both this disclosure and the appended claims. It is intended that the scope of the present teachings should be determined by proper interpretation and construction of the appended claims and their legal equivalents, as understood by those of skill in the art relying upon the disclosure in this specification and the attached drawings.

1. A method for storing a transporter in a vehicle, the transporter including a processor configured to execute instructions to control motion of the transporter, the vehicle having a storage compartment, the storage compartment having a door, the door being associated with a doorway, the method comprising:

- receiving, by the processor, and segmenting, by the processor, sensor data from sensors associated with the transporter;
- identifying, by the processor, at least one plane within the segmented sensor data;
- identifying, by the processor, the door and the doorway within the at least one plane;
- measuring, by the processor, the doorway, including a width of the doorway;
- generating, by the processor, an alert if the doorway is smaller than the a pre-selected size related to a size of the transporter;
- positioning, by the processor, the transporter for entering the vehicle through the doorway, the positioning being based at least in part on the width of the doorway;
- generating, by the processor, a first signal for opening the door;
- providing, by the processor, at least one movement command instructing the transporter to move through the doorway; and
- generating, by the processor, a second signal to close the door.

2. The method as in claim 1 further comprising:

- generating a third signal to lock the transporter in the vehicle.

3. The method as in claim 1 further comprising:

- reacting to at least one obstacle while maneuvering the transporter including:

- receiving, by the processor from a user, at least one command and user information;

- receiving, by the processor, and segmenting, by the processor, obstacle data from at least one sensor

- associated with the transporter, the at least one sensor collecting the obstacle data as the transporter moves;

- identifying, by the processor, a second at least one plane within the segmented obstacle data;

- identifying, by the processor, the at least one obstacle within second the at least one plane;

- determining, by the processor, an obstacle distance between the transporter and the at least one obstacle;

- accessing, by the processor, at least one allowed command related to the obstacle distance, the at least one obstacle, and at least one situation identifier;

- accessing, by the processor, at least one automatic response to the at least one command;

- relating, by the processor, the at least one command to one of the at least one allowed commands forming a related allowed command; and

- providing, by the processor, at least one first movement command instructing the transporter to move the transporter based at least on the at least one command and the at least one automatic response associated with the related allowed command.

4. The method as in claim 3 wherein the at least one obstacle comprises at least one moving object.

5. The method as in claim 3 wherein the obstacle distance comprises a dynamically-varying amount.

6. The method as in claim 3 wherein the at least one movement command comprises a pass-the-at-least-one-obstacle command.

7. The method as in claim 3 further comprising:

- analyzing the obstacle data using a point cloud library (PCL).

8. The method as in claim 4 further comprising:

- tracking the at least one moving object using simultaneous location and mapping (SLAM) with detection and tracking of moving objects (DATMO) based on a location of the transporter.

9. A transporter automatically autonomously storing itself, the transporter comprising:

- at least one processor executing instructions to:

- receive at least one movement command and user information;

- receive and segment PCL data;

- identify a plane within the segmented PCL data;

- identify at least one obstacle within the plane;

- determine at least one situation identifier based at least on the user information, the at least one movement command, and the at least one obstacle;

- determine a distance between the transporter and the at least one obstacle based at least on the at least one situation identifier;

- access an allowed command related to the distance, the at least one obstacle, and the at least one situation identifier;

- access an automatic response associated with the allowed command;

- access the at least one movement command;

- relate the at least one movement command with at least one of the allowed commands; and

- receive the at least one movement command and the automatic response associated with the related commands.

10. The transporter as in claim 9 wherein the at least one processor comprises instructions to: